

# Work Order ID 74644

Tuesday, October 04, 2011 1:44:09 PM



Page 1

Item ID: D3953-3

Accept



Setup Start



Revision ID:

Stop



Item Name: Gas Spring Stud, Lid

Start Date: 10/4/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 10/11/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 11/10/11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3953

C

100

0.00



Doosan

Doosan Lathe

Memo

Turn as per folio FA852 & DWG

FOLIO REV:

DWG REV: C

0.00

SA 11/10/11

6

DEBURR

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Quality Control

Memo

0.00

SA 11/10/11

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 74644**

Tuesday, October 04, 2011 1:44:09 PM

Page 2

Item ID: D3953-3

Accept

Setup Start

Revision ID:

Stop

Item Name: Gas Spring Stud, Lid

Start Date: 10/4/2011 Start Qty: 6.00

Cust Item ID:

Required Date: 10/11/2011 Req'd Qty: 6.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

130

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control



11/10/11 (C)

11/10/12  
UMF 11-10-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, October 04, 2011 1:44:05 PM

Page 1

Work Order ID: 74644



Parent Item: D3953-3



Parent Item Name: Gas Spring Stud, Lid

Start Date: 10/4/2011


Required Date: 10/11/2011

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP RevA: New issue DD verified by:EC  
per dwg revC DD 10.03.02 verified by:EC

IPP Rev:B as

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304RO.750  304 SS Roundbar .750		Purchased	No			100	f	71.4730	0.125	0.789474			



SA 11/10/11

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT028	25.826	
116501	1.746	
116623	24.08	
MAT029	45.647	
117481	21.447	
118509	24.2	

.877

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	74644
<b>Description:</b> Gas Spring Stud, Lid		<b>Part Number:</b>	D3953-3
<b>Inspection Dwg:</b> D3953	<b>Rev:</b> C	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.75	+/-0.030	.757	/		SA 9	
0.56	+/-0.010	.559	/			
0.281	+/-0.010	.281	/			
1/4-28 UNF-2A	N/A	1/4-28 UNF-2A	/			
Major Ø	Max = 0.2490 Min = 0.2425	.246	/			
M.O.W.	Max = 0.26687 Min = 0.26357	.266	/			
Ø0.098	+0.004/-0.001	Ø.100	/			
Ø0.250	+/-0.010	.246	/			
0.170	+/-0.010	.172	/			
0.330	+/-0.010	.330	/			
0.13	+/-0.030	.132	/			
R0.06	+/-0.030	R.06	/			
1.31	+/-0.030	1.311	/			

<b>Measured by:</b>	SA	<b>Audited by:</b>	SA	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	11/10/11	<b>Date:</b>	11/10/11	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	
B	09.12.14	Dwg Rev updated	KJ	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

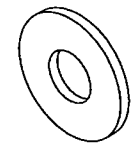
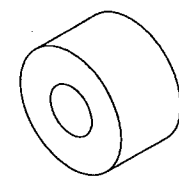
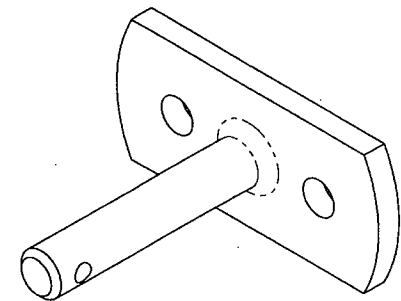
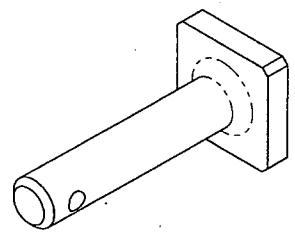
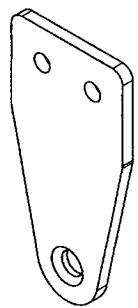
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





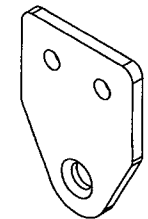
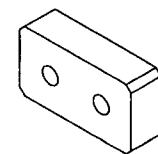
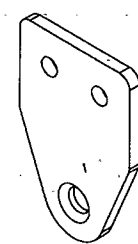
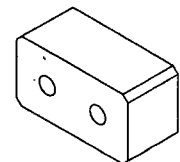
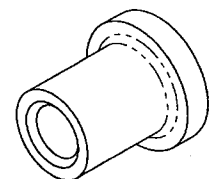
**D3953-1 GAS SPRING BRACKET**  
(FULL LID)

**D3953-3 GAS SPRING STUD, LID**

**D3953-5 GAS SPRING STUD, BASE**

**D3953-7 GAS SPRING SPACER**

**D3953-9 GAS SPRING WASHER**



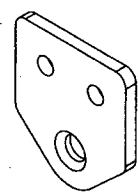
**D3953-11 GAS SPRING SPACER**

**D3953-13 GAS SPRING SPACER**  
(FULL LID)

**D3953-15 GAS SPRING BRACKET**  
(SPLIT LID)

**D3953-17 GAS SPRING SPACER**  
(SPLIT LID)

**D3953-19 GAS SPRING BRACKET**  
(SQUARE BASKET)



**D3953-21 GAS SPRING BRACKET**  
(SQUARE BASKET)

RELEASED  
2010-02-26

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 34644 M.C.5  
11/10/04

C	PARTS -19 & -21 ADDED (SHT 1& 4); CSK CALLOUT WAS CHAM (D6-2, B6-3, C6-4); & SYMM WAS & SYM ABOUT (C7-2, C7-4); SECTION C-C REPOSITIONED TO B2-4		JPH	10.01.29
B	SHEET 3 ZONE C1, DIM 0.05 MIN WAS 0.13, MULTIPLE DIMENSIONS MIN/MAX REMOVED TOLERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY.		AJS	09.11.11
A	NEW ISSUE		AJS	09.07.27
REV.	DESCRIPTION		BY	DATE
DESIGN	AJS	DART AEROSPACE LTD		
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA		
CHECKED	JP	DRAWING NO.	REV. C	
MFG. APPR.	JP	D3953	SHEET 1 OF 4	
APPROVED	JP	TITLE	SCALE	
DE APPR.	JP	GAS SPRING LID COMPONENTS	NTS	
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

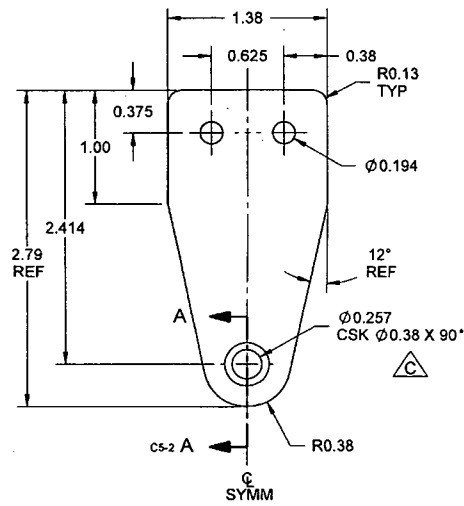
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

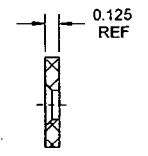
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

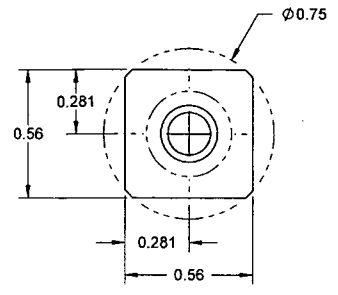
74644



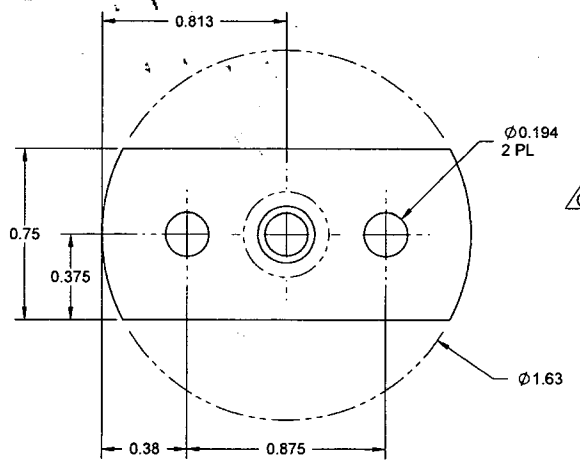
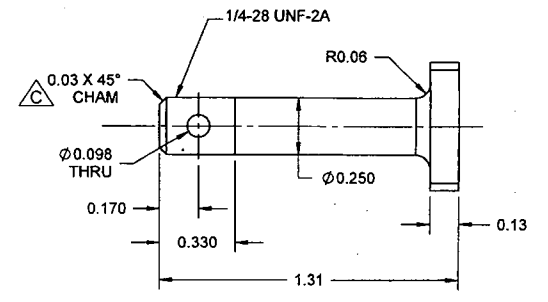
**D3953-1 GAS SPRING BRACKET**  
(FULL LID)



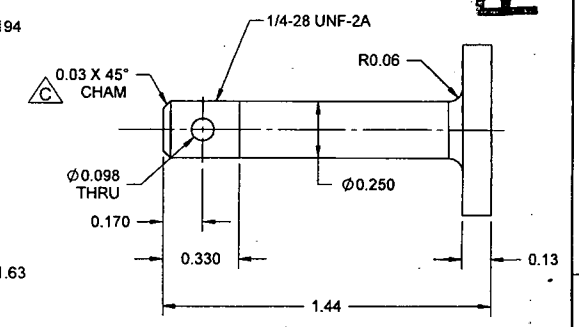
**SECTION A-A C7-2**



**D3953-3 GAS SPRING STUD, LID**



**D3953-5 GAS SPRING STUD, BASE**



RELEASED  
2010-02-26

- NOTES:**
- 1) MATERIAL -1: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA
  - 3 & -5: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B OR: AISI 304/316 STAINLESS STEEL ROD REF DART SPEC M304R
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT -1: 0.11 lbs  
-3: 0.03 lbs  
-5: 0.06 lbs

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	<b>D3953</b>	SHEET 2 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>GAS SPRING LID COMPONENTS</b>	NTS
DATE	10.01.29	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

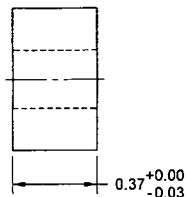
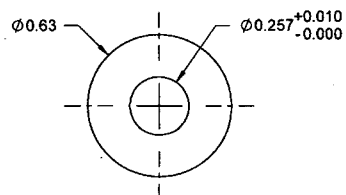
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

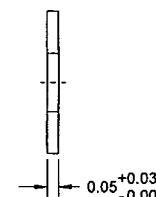
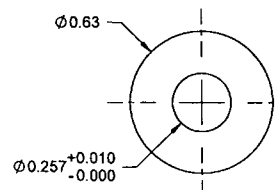
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

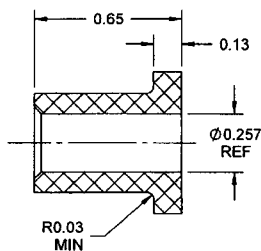
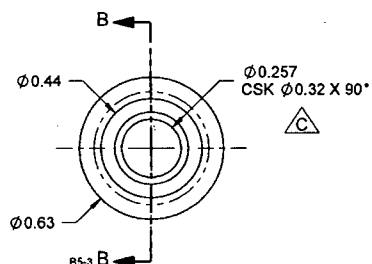
74644



**D3953-7 GAS SPRING SPACER**

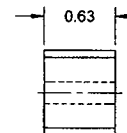
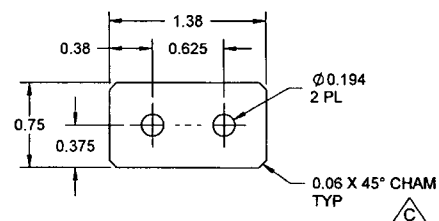


**D3953-9 GAS SPRING WASHER**



**D3953-11 GAS SPRING SPACER**

**SECTION B-B 87-3**



**D3953-13 GAS SPRING SPACER**

**NOTES:**

1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK  
REF DART SPEC M-DELIN-R

-13: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B

- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT -7/-9/-11: < 0.01 lbs EACH  
-13: 0.17 lbs

**RELEASED**  
2010-02-26

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D3953	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GAS SPRING LID COMPONENTS	NTS
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

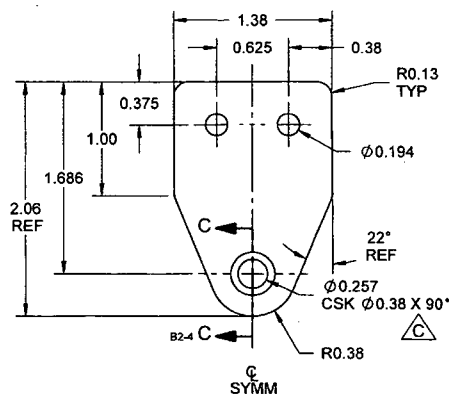
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

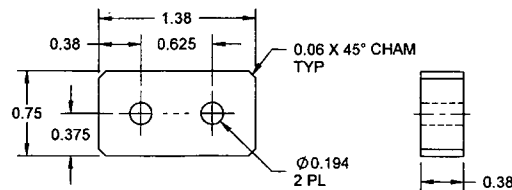
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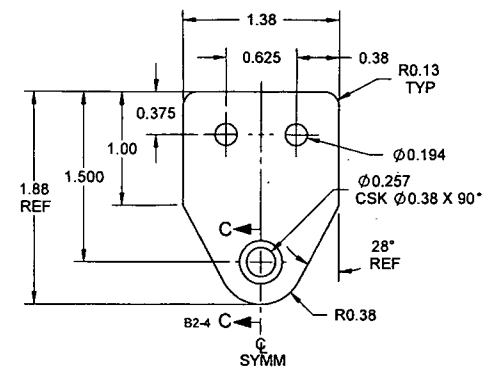
74644



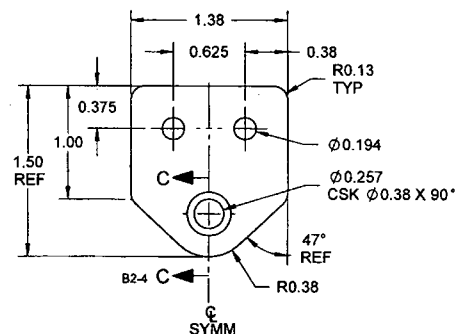
**D3953-15 GAS SPRING BRACKET**  
(SPLIT LID)



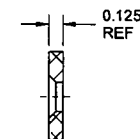
**D3953-17 GAS SPRING SPACER**  
(SPLIT LID)



**D3953-19 GAS SPRING BRACKET**  
(SQUARE BASKET)



**D3953-21 GAS SPRING BRACKET**  
(SQUARE BASKET)



**SECTION C-C**

**RELEASED**  
2010-02-25

- NOTES:**
- 1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT -15: 0.08 lbs  
-17: 0.10 lbs  
-19: 0.07 lbs  
-21: 0.06 lbs

-17: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	<b>D3953</b>	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>GAS SPRING LID COMPONENTS</b>	NTS
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries